

**A CRISIS ON PATENTING SMART
CONTRACT INNOVATIONS—AN
IMPLICATION FROM BOOM! PAYMENTS,
INC. V. STRIPE, INC.**

PING-HSUN CHEN*

ABSTRACT

This article discusses the patent-eligibility issue of smart contract innovations and attempts to warn that there may be a crisis on patenting smart contract technology. The escrow nature of a smart contract connects the patent-eligibility issue to Boom! Payments, Inc., where the disputed claims were found to be directed at “the abstract idea of payment escrow.” The standard for patent-eligibility determination is a two-step approach starting with a question of “whether the claims at issue are directed to one of those patent-ineligible concepts” and, if so, then the court “consider[s] the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” Under Boom!, a smart contract claim may be held patent-ineligible as an abstract idea of escrow if it merely recites a process for a third party to verify the completion of a transaction and then release payment. However, Enfish may suggest strategic patent drafting for a smart contract invention to overcome the patent-eligibility challenge. The specification of a smart contract patent should include: (1)

* Professor, Graduate Institute of Technology, Innovation and Intellectual Property Management, National Chengchi University. J.D. 10’ & LL.M. 08’, Washington University in St. Louis School of Law; LL.M. 07’, National Chengchi University, Taiwan; B.S. 97’ & M.S. 99’ in Chem. Eng., National Taiwan University, Taiwan.

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a conventional smart contract that needs improvements by the claimed invention; (2) the details of executing the conventional smart contract; (3) the details of executing the claimed invention; (4) the algorithm required to perform the claimed invention; and (5) technological benefits brought by the claimed invention that demonstrates the claimed invention’s advance over the conventional smart contract.

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I. INTRODUCTION

A “smart contract” is basically an idea of digitizing and automating the execution and enforcement of contracts.¹ The concept of “smart contract” became popularized in 1994 when Nick Szabo created the name “smart contract” and defined it as “a computerized transaction protocol [, or a computer program,] that executes the terms of a contract.”² Currently, with the help of blockchain technology, smart contracts can be implemented, for instance, in the Ethereum Blockchain developed by Vitalik Buterin.³ “Ethereum” is a kind of virtual currency, known as “ETH.”⁴

¹ See Kyung Taeck Minn, Note, *Towards Enhanced Oversight of “Self-Governing” Decentralized Autonomous Organizations: Case Study of the Dao and Its Shortcomings*, 9 N.Y.U. J. INTELL. PROP. & ENT. L. 139, 142–43 (2019); see also Max Raskin, *The Law and Legality of Smart Contracts*, 1 GEO. L. TECH. REV. 305, 309–10 (2017) (discussing the definition of “smart contract”).

² Minn, *supra* note 1, at 142 (alteration in original) (quoting Nick Szabo, *Smart Contracts*, (1994), <https://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart.contracts.html> [<https://perma.cc/55GJ-PWNW>]); see also Anna Duke, Comment, *What Does the CISG Have to Say About Smart Contracts? A Legal Analysis*, 20 CHI. J. INT’L L. 141, 146 (2019); Alan Rosenberg, *Automatic Contracts and the Automatic Stay—A Primer on “Smart Contracts” in Bankruptcy*, AM. BANKR. INST. J., July 2019, at 18, 18–19 (introducing the history of “smart contracts”).

³ See Huang-Chih Sung, *When Open Source Software Encounters Patents: Blockchain As an Example to Explore the Dilemma and Solutions*, 18 J. MARSHALL REV. INTELL. PROP. L. 55, 60–62 (2018) (describing how the Ethereum Blockchain works).

⁴ See *Snyder v. STX Techs., Ltd.*, No. 19-6132 RJB, 2021 WL 228899, at *4 (W.D. Wash. Jan. 22, 2021).

In practice, a smart contract is a self-executing contract in the form of lines of code, where the lines represent the terms of an agreement between a buyer and a seller.⁵ The terms of a smart contract can be executed automatically via computer transaction protocols based on a set of conditions.⁶ For example, “oracles” are data feeds such as weather data, currency exchange rates, airline flight information, sports statistics, and other information that can be set as conditions for executing a smart contract.⁷ “Oracles” connect Ethereum to off-chain, real-world information to confirm whether those conditions are met.⁸ “Oracles” also give direction or approval to execute a smart contract if relevant conditions are satisfied.⁹

Some companies have filed patent applications for their smart contract technologies.¹⁰ For example, U.S. Patent No. 10,832,239, issued to Alibaba Group Holding

⁵ Rensel v. Centra Tech, Inc., No. 17-24500-CIV-KING/SIMONTON, 2018 WL 4410110, at *10 (S.D. Fla. June 14, 2018).

⁶ *Id.*

⁷ Paola Heudebert & Claire Leveneur, *Blockchain, Disintermediation and the Future of the Legal Professions*, 4 CARDOZO INT’L & COMP. L. REV. 275, 315–16 (2020) (discussing how a smart contract works).

⁸ See *ORACLES*, <https://ethereum.org/en/developers/docs/oracles/> [Perma | Oracles | ethereum.org].

⁹ Alan Cohn, Travis West & Chelsea Parker, *Smart After All: Blockchain, Smart Contracts, Parametric Insurance, and Smart Energy Grids*, 1 GEO. L. TECH. REV. 273, 282–83 (2017) (describing the functions of “oracles” in executing a smart contract).

¹⁰ See, e.g., Paddy Baker, *Ripple Wins US Patent for New Oracle-Based Smart Contract Design*, NASDAQ (Oct. 2, 2020), <https://www.nasdaq.com/articles/ripple-wins-us-patent-for-new-oracle-based-smart-contract-design-2020-10-02> [Perma | Ripple Wins US Patent for New Oracle-Based Smart Contract Design | Nasdaq]; Alex Lielacher, *Jack Ma’s Alibaba applies for smart contract “intervention” patent*, BRAVE NEW COIN (Oct. 10, 2018), <https://bravenewcoin.com/insights/jack-ma’s-alibaba-applies-for-smart-contract-intervention-patent> [Perma | Jack Ma’s Alibaba applies for smart contract “intervention” patent - Brave New Coin].

Limited, describes a system for executing a smart contract based on a list of accounts provided by the contract's creator, allowing a participant with a valid account to call the smart contract.¹¹ U.S. Patent No. 10,657,607, issued to ADP, L.L.C., illustrates several schemes of managing payroll using blockchains and smart contracts.¹² Lastly, American Express Travel Related Services Company, Inc. is listed as an assignee on U.S. Patent No. 10,832,247 which relates to a blockchain-based system for executing payment transactions with personal digital wallets.¹³

Because applications of smart contracts utilize Internet technology, patent-eligibility is a concern to someone who owns or wants to file a patent for a smart contract innovation in the United States.¹⁴ Under 35 U.S.C. § 101, processes, machines, manufactures, and compositions of matter are “four independent categories of inventions or discoveries that are eligible for [patent] protection,”¹⁵ but the Supreme Court has recognized three patent-ineligible subject matters: laws of nature, physical phenomena, and abstract ideas.¹⁶

The contemporary standard for patent-eligibility determination developed by the Supreme Court in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*

¹¹ See U.S. Patent No. 10,832,239 col. 4 ll. 24–38.

¹² See U.S. Patent No. 10,657,607 col. 7 l. 20–col. 8 l. 33.

¹³ See U.S. Patent No. 10,832,247 col. 1 l. 49–col. 2 l. 7.

¹⁴ See, e.g., Gurneet Singh, *Are Internet-Implemented Applications of Block-Chain Technology Patent-Eligible in the United States?*, 17 CHL-KENT J. INTELL. PROP. 356, 368, 375 (2018); see generally Ping-Hsun Chen, *Questionable Patent-Eligibility of IoT Technology*, 22 MARQUETTE. INTELL. PROP. L. REV. 165, 167 (2018).

¹⁵ *Bilski v. Kappos*, 561 U.S. 593, 601 (2010); 35 U.S.C. § 101 (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent. . .”).

¹⁶ *Bilski*, 561 U.S. at 601 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

and in *Alice Corp. Pty. v. CLS Bank International* is a two-step approach applicable to all three patent-ineligible subject matters.¹⁷ Many Internet-based patents have been found ineligible because they fall within the “abstract idea” category.¹⁸ Thus, a smart contract patent may be ineligible if the utilization of Internet technology in the claims is not enough to transform the claimed inventions into patent-eligible subject matter.¹⁹

This article discusses the patent-eligibility issue of smart contract innovations and attempts to warn that there may be a crisis on patenting smart contract technology. *Boom! Payments, Inc. v. Stripe, Inc.* is the focus because the Federal Circuit held the disputed claims patent-ineligible, pointing to the abstract idea of payment escrow as its reasoning.²⁰ “Smart contract” has been described as “essentially function[ing] as an automated, secure digital escrow account.”²¹ Therefore, the *Boom!* decision may suggest a crisis on patenting smart contracts.

Part II of this article introduces the patent-eligibility standard developed by the Supreme Court and Federal

¹⁷ See *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 72–73, 77–79 (2012)); see also *CardioNet, L.L.C. v. InfoBionic, Inc.*, 955 F.3d 1358, 1366 (Fed. Cir. 2020); Minki Kwon, *Waiting for Godot: A Proposal for the Supreme Court to Revisit Post-Mayo Patent Eligibility Question*, 48 AIPLA Q.J. 489, 507–08 (2020); Elaine H. Nguyen, Note, *Scalpels over Sledgehammers: Saving Diagnostic Patents Through Judicial Intervention Rather Than Legislative Override*, 70 DUKE L.J. 1631, 1643–44 (2021); Paul R. Gugliuzza, *Law, Fact, and Patent Validity*, 106 IOWA L. REV. 607, 622 (2021).

¹⁸ See Jasper L. Tran, *Alice at Seven*, 101 J. PAT. & TRADEMARK OFF. SOC’Y 454, 455–56 (2021).

¹⁹ See *id.*

²⁰ See *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App’x 528, 532–33 (Fed. Cir. 2021).

²¹ *In re Bibox Grp. Holdings Ltd. Sec. Litig.*, 534 F. Supp. 3d 326, 330 (S.D.N.Y. 2021).

Circuit. Part II also explains the escrow nature of smart contract technology. Part III analyzes the *Boom!* decision, covering the technical background, representative claim, and the Federal Circuit’s patent-eligibility analysis. Finally, Part IV discusses practical implications drawn from *Boom!* and provides a potential approach to resolve this crisis.

II. PATENT-ELIGIBILITY STANDARD UNDER THE FEDERAL CIRCUIT’S JURISPRUDENCE

A. *Alice Standard*

The *Alice* analysis starts with the question of “whether the claims at issue are directed to one of those patent-ineligible concepts.”²² If so, the analysis goes on to “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.”²³ In step two, what is looked for is “an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’”²⁴ The same analysis applies to both method claims and system claims.²⁵

Under *Alice*, a patent-eligible claim “must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [ineligible subject matter].’”²⁶ A claim must do “more than simply

²² *Alice Corp. Pty.*, 573 U.S. at 217.

²³ *Id.*

²⁴ *Id.* at 217–18 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 72 (2012)).

²⁵ *See id.* at 226.

²⁶ *Id.* at 221 (first alteration in original); *see also Mayo Collaborative Servs.*, 566 U.S. at 77 (“If a law of nature is not patentable, then neither is a process reciting a law of nature, unless that process has additional

stat[e] the [ineligible subject matter] while adding the words ‘apply it.’”²⁷ Otherwise, it fails the step-two analysis by “[s]imply appending conventional steps, specified at a high level of generality”²⁸ Moreover, the *Alice* Court has identified two claim-drafting examples that cannot satisfy step two: (1) introducing a computer into a claim as part of a mere instruction on how to implement an abstract idea on a computer, and (2) limiting the use of a patent-ineligible subject matter to a particular technological environment.²⁹

B. Federal Circuit’s Approach to the Alice Standard

Since *Alice Corp.*, the Federal Circuit has gradually developed guidance on how to apply the *Alice* standard.³⁰ In performing step one, the Federal Circuit focuses on “the claims ‘in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.’”³¹ The

features that provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself.”)

²⁷ *Alice Corp. Pty.*, 573 U.S. at 221; see also *Mayo Collaborative Servs.*, 566 U.S. at 72 (“Still, as the Court has also made clear, to transform an unpatentable law of nature into a patent-eligible *application* of such a law, one must do more than simply state the law of nature while adding the words ‘apply it.’”).

²⁸ *Alice Corp. Pty.*, 573 U.S. at 222; see also *Mayo Collaborative Servs.*, 566 U.S. at 82 (“Other cases offer further support for the view that simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena, and ideas patentable.”).

²⁹ See *Alice Corp. Pty.*, 573 U.S. at 222–23.

³⁰ See Ping-Hsun Chen, *Federal Circuit’s Jurisprudence of the Patent-Eligibility Analysis: Toward a Bright-Line Rule*, 21 UIC REV. INTELL. PROP. L. 16, 18–27 (2021).

³¹ *CardioNet, L.L.C. v. InfoBionic, Inc.*, 955 F.3d 1358, 1367 (Fed. Cir. 2020) (quoting *McRO, Inc. v. Bandia Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016)).

Federal Circuit also “consider[s] the patent’s written description [which] informs [the court’s] understanding of the claims.”³² However, the Federal Circuit cautions that “when analyzing patent eligibility, reliance on the specification must always yield to the claim language in identifying that focus.”³³ Moreover, the Federal Circuit disregards “whether the prior art demonstrates that the idea or other aspects of the claim are known, unknown, conventional, unconventional, routine, or not routine.”³⁴

In performing step two, the Federal Circuit uses a common law methodology by “applying the law to comparable facts” to determine whether the disputed claim has an inventive concept.³⁵ However, the Federal Circuit has reminded us that this methodology relies on “only the most relevant prior opinions, rather than every prior opinion in an actively-litigated field”³⁶ Additionally, although acknowledging that step two “must be decided on a case-by-case basis in light of the particular claim limitations, patent specification, and invention at issue,”³⁷ the Federal Circuit has embraced an approach where “[t]he second step of the *Alice* test is satisfied when the claim limitations ‘involve more than performance of “well-understood, routine, [and] conventional activities previously known to the industry.”’”³⁸ Furthermore, the

³² *Id.* at 1368.

³³ *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019).

³⁴ *CardioNet, L.L.C.*, 955 F.3d at 1372.

³⁵ *See Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294–95 (Fed. Cir. 2016); *see also* Chen, *supra* note 30, at 24.

³⁶ *Amdocs (Isr.) Ltd.*, 841 F.3d at 1295.

³⁷ *CosmoKey Sols. GmbH & Co. KG v. Duo Sec. L.L.C.*, 15 F.4th 1091, 1099 (Fed. Cir. 2021).

³⁸ *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (alteration in original) (quoting *Content Extraction & Transmission L.L.C. v. Wells Fargo Bank N.A.* 776 F.3d 1343, 1347–48 (Fed. Cir.

Federal Circuit may rely on “intrinsic evidence from the specification” to affirm a grant of a dismissal motion on the ground of patent-ineligibility.³⁹

Recently, the Federal Circuit in *Rady v. Bos. Consulting Grp., Inc.* first dealt with the patent-eligibility issue of a blockchain patent, U.S. Patent No. 10,469,250 (“250 Patent”), titled “Physical Item Mapping to Blockchain Framework” and involved scanning a physical item to determine the item’s “signature” and then recorded the signature to a blockchain.⁴⁰ Claim 1 of the ‘250 Patent recites “a network node” comprising four types of components: (1) one or more processing devices; (2) a storage device; (3) a communications subsystem; and (4) item analysis components.⁴¹ It also includes the process of analyzing and recording such a signature through those processing devices.⁴² The Federal Circuit upheld the district court’s decision that the disputed claims failed to pass either step one or step two of the *Alice* standard.⁴³

The Federal Circuit’s step-one analysis started with summarizing the disputed claims as “identifying a physical item’s unique pattern of physical imperfections, or ‘signature,’ and then recording that information to a

2014) (quoting *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 225 (2014)).

³⁹ See *Secured Mail Sols. L.L.C. v. Universal Wilde, Inc.*, 873 F.3d 905, 912 (Fed. Cir. 2017).

⁴⁰ See Kristopher B. Kastens & Timothy Layden, *First District Court Decision on Blockchain Technology Patent Eligibility*, KRAMER LEVIN (April 11, 2022), <https://www.kramerlevin.com/en/perspectives-search/first-district-court-decision-on-blockchain-technology-patent-eligibility.html> [<https://perma.cc/VH5Q-RNR9>]; see also *Rady v. Bos. Consulting Grp., Inc.*, No. 2022-2218, 2024 WL 1298742, at *1 (Fed. Cir. Mar. 27, 2024); U.S. Patent No. 10,469,250 abstract.

⁴¹ See *Rady*, 2024 WL 1298742, at *1.

⁴² See *id.*

⁴³ See *id.*; see also *Rady v. Bos. Consulting Grp., L.L.C.*, No. 1:20-CV-02285 (ALC), 2022 WL 976877, at *3 (S.D.N.Y. Mar. 31, 2022).

blockchain if the object has not been previously registered.”⁴⁴ The Federal Circuit commented that “claims directed to gathering and storing data, without more, are impermissibly abstract.”⁴⁵ Ultimately, the Federal Circuit held that the disputed claims were directed to an abstract idea on three grounds.⁴⁶

The first ground was that “identifying items by their unique physical features is a long-standing and well-established practice.”⁴⁷ The Federal Circuit found that the ‘250 Patent’s specification revealed, for example, a website explaining how to identify diamonds by their unique imperfections.⁴⁸ In addition, while recognizing that the specification described the use of specific devices rather than a generic computer for imperfection detection, the Federal Circuit opined that the claim language was too broad to present “any new measurement techniques or measurement devices to identify such imperfections.”⁴⁹ The Federal Circuit further criticized that the specification failed to detail how various components can work together to identify imperfections and merely referred to the prior art as a source of understanding how these components function.⁵⁰

The second ground was that “the claimed invention relies on the conventional use of existing blockchain

⁴⁴ *Rady*, 2024 WL 1298742, at *3.

⁴⁵ *Id.*

⁴⁶ *See id.* at *3–*4.

⁴⁷ *Id.* at *3.

⁴⁸ *Id.*; *see also* U.S. Patent No. 10,469,250 col. 3 ll. 56–59 (“Further general information on same is available at <https://www.jewelry-secrets.com/Blog/black-spots-in-diamonds/>, incorporated herein by reference in its entirety.”) (citing *First District Court Decision on Blockchain Technology Patent Eligibility*, KRAMERLEVIN.COM (last visited Oct. 5, 2024), <https://www.jewelry-secrets.com/Blog/black-spots-in-diamonds/> [<https://perma.cc/7AUF-Y57T>]).

⁴⁹ *Rady*, 2024 WL 1298742, at *3.

⁵⁰ *See id.* at *4.

technology.”⁵¹ The Federal Circuit pointed out that the specification not only incorporated references “describing conventional blockchain construction and performance” but also recognized that “blockchain technology has previously been used in connection with the management of ‘physical assets.’”⁵² Thus, the Federal Circuit concluded that the specification did not “disclose any new type of blockchain or any improvement in blockchain functionality.”⁵³

The third ground was that “utility is not the measure of patent eligibility,” which responded to the patentee’s assertion that the claimed invention “may be useful in preventing the counterfeiting of gemstones.”⁵⁴ The Federal Circuit noted that the disputed claims simply used existing imaging and blockchain technologies “in predictable ways to address the economic problem of counterfeit goods” without providing “purported improvement” in these technologies.⁵⁵ Consequently, the Federal Circuit held that the disputed claims were “directed to an abstract idea.”⁵⁶

Regarding *Alice* step two, the Federal Circuit concluded that the disputed claims “fail[ed] to supply the inventive concept” because they “use[d] conventional item analysis components and existing blockchain technology to implement the abstract idea of gathering and storing information about physical objects.”⁵⁷ The Federal Circuit disagreed with the patentee’s argument that “his ‘claims [were] directed to the inventive combination of multiple item analyses components to capture’ the unique imperfections in physical objects.”⁵⁸ Rather, the Federal

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Rady*, 2024 WL 1298742, at *4.

⁵⁶ *Id.*

⁵⁷ *Id.* at *5.

⁵⁸ *Id.*

Circuit found that the ‘250 Patent showed neither any inventive way to configure and combine those “various ‘item analysis components’” nor “any novel type of blockchain or other decentralized network.”⁵⁹ Moreover, the patent does not “disclose any improved or otherwise unconventional technique for storing data on a blockchain.”⁶⁰ Therefore, the Federal Circuit held that the disputed claims failed to supply the inventive concept that is required at *Alice* step two.⁶¹

C. ***Questionable Patent-Eligibility of Smart Contract Technology***

The Federal Circuit has summarized two information-related patent-ineligible abstract ideas: (1) “collecting information, including when limited to particular content (which does not change its character as information)” and (2) “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes.”⁶² This view toward information technology may raise a concern about patent-eligibility of smart contract technology.⁶³

In re Bibox Grp. Holdings Ltd. Sec. Litig. has provided a method-like description of smart contract technology by stating:

A smart contract allows the parties to define the terms of their contract and submit the crypto-assets

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Rady*, 2024 WL 1298742, at *5.

⁶² *Elec. Power Grp., L.L.C. v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016).

⁶³ See Austin Paalz, *Patent Wars: The Attack of Blockchain*, 28 TEX. INTELL. PROP. L.J. 241, 264–67 (2020) (analyzing the patent-eligibility issue of blockchain patents under the *Alice* standard).

contemplated in the contract to a secure destination. The smart contract then automatically distributes the crypto-assets to the appropriate party upon the satisfaction of the relevant conditions precedent defined in the smart contract.⁶⁴

This description helps explain that a claim of a smart-contract application is composed of steps of transmitting, analyzing, verifying, and processing information.⁶⁵ The question then becomes whether the Federal Circuit case law may provide guidance for patent-eligibility determination of smart contract technology. Because the patent-eligibility analysis is fact-driven, to find the most analogous case to resolve the issue, it is worth understanding the nature of smart contracts.

Kevin Werbach and Nicolas Cornell have observed that a smart contract has a perspective of escrow.⁶⁶ A traditional escrow agreement designates an escrow agent to determine whether contractual obligations have been fulfilled or any issues have been resolved and to further hold or execute a required payment.⁶⁷ However, the execution step in a smart contract is fully automated, or it is executed through “multisig,” a form of multiple-signature verification.⁶⁸ If a multisig smart contract is formed among three parties (typically a buyer, a seller, and a trusted third party), executing the smart contract requires at least two digital signatures out of the three parties.⁶⁹

While a smart contract is similar to an escrow agreement, these two mechanisms are slightly different in

⁶⁴ In re Bibox Grp. Holdings Ltd. Sec. Litig., 534 F. Supp. 3d 326, 330 (S.D.N.Y. 2021).

⁶⁵ See *id.*

⁶⁶ See Kevin Werbach & Nicolas Cornell, *Contracts Ex Machina*, 67 DUKE L.J. 313, 344 (2017).

⁶⁷ See *id.*

⁶⁸ *Id.* at 344–45.

⁶⁹ *Id.* at 345.

execution.⁷⁰ Nonetheless, this escrow nature of smart contracts connects the patent-eligibility issue to *Boom! Payments, Inc.* where the disputed claims were found to be directed to “the abstract idea of payment escrow.”⁷¹

III. ANALYSIS OF *BOOM! PAYMENTS, INC. V. STRIPE, INC.*

A. *Background*

U.S. Patent Nos. 8,429,084 (“‘084 Patent”), 9,235,857 (“‘857 Patent”), and 10,346,840 (“‘840 Patent”) were the disputed patents in *Boom! Payments, Inc.*⁷² The patented technology targeted a payer’s need for an authorized payment only after the payer’s examination and possession of the purchased goods or a completed electronic payment.⁷³ To meet the need, the disputed patents offered “an Internet-based system, such as an online marketplace, that facilitates payments between buyers and sellers.”⁷⁴

The patented system provided a “buyer identifier” to a buyer for verifying a consummated transaction.⁷⁵ When a buyer decides to purchase an object, she will provide payment information “(e.g., credit card, debit card, bank identifier, PAYPAL®, or the like)” to the system and pay the price tentatively.⁷⁶ Then, the system gives the unique buyer identifier to the buyer.⁷⁷ When the buyer meets the seller and accepts the transacted object, she will

⁷⁰ *See id.* at 344–45.

⁷¹ *See Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App’x 528, 532 (Fed. Cir. 2021).

⁷² *Id.* at 529.

⁷³ *See id.*

⁷⁴ *Id.*

⁷⁵ *See id.* at 529–30.

⁷⁶ *Id.* at 530; *see also* U.S. Patent No. 8,429,084 col. 5 ll. 5–13.

⁷⁷ *Boom! Payments, Inc.*, 839 F. App’x at 530.

give the buyer identifier to the seller.⁷⁸ Finally, the seller uses this buyer identifier to initiate the payment in the system.⁷⁹

The district court found the disputed claims patent-ineligible.⁸⁰ Under step one, the district court considered the disputed claims as not only an “abstract idea of authenticating internet sales through the use of a third-party intermediary” but also a combination of “the concept of escrow” and an “idea of using identification codes to authorize a transaction.”⁸¹ Under step two, the district court held that the disputed claims lacked an inventive concept because they “describe[d] a computerized escrow arrangement in the form of a payment processing system”⁸² The district court opined that the disputed claims failed to “describe improvements to the processing technology itself.”⁸³

On appeal, the Federal Circuit upheld the district court’s patent-ineligibility determination.⁸⁴ The representative claim for the patent-eligibility analysis was claim 1 of the ‘840 Patent reciting:

1. An Internet-based computer system for confirming that a proposed sale transaction has been consummated, said Internet-based computer system including a payment processor system comprising at least one computer device programmed to:

receive a buyer’s payment information and store said payment information;

⁷⁸ *Id.*

⁷⁹ *See id.*

⁸⁰ *See Boom! Payments, Inc. v. Stripe, Inc.*, No. 19-CV-00590-VC, 2019 WL 6605314, at *1 (N.D. Cal. Nov. 19, 2019).

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App’x 528, 529 (Fed. Cir. 2021).

prior to a sale of an at least one item associated with an online store of a seller to said buyer, *receive*, at said payment processor system, *a request transmitted from a buyer computer device* for said buyer to be able to purchase at least one item offered for sale by said online store;

in response to said request, *generate a transaction-specific buyer acceptance identifier* comprising a combination of human-readable characters;

provide said transaction-specific buyer acceptance identifier to said buyer computer device;

store in computer-accessible memory associated with said payment processor system a record comprising a relationship between said transaction-specific buyer acceptance identifier, a buyer-specific identifier, and a seller-specific identifier;

receive from a seller computer device an identifier of the transaction, *an identifier of the buyer, and an identifier of the seller*;

compare the identifier of the transaction with the transaction-specific buyer acceptance identifier;

compare the identifier of the buyer with the buyer-specific identifier;

compare the identifier of the seller with the seller-specific identifier; and

if said identifier of the transaction corresponds to the transaction-specific identifier, said identifier of the buyer corresponds to the buyer-specific identifier, and said identifier of the seller corresponds to the seller-specific identifier, *charge an account associated with the buyer for an amount associated*

with the request to purchase at least one item offered for sale by said online store.⁸⁵

B. Step One Analysis

Regarding step one, the Federal Circuit found that the disputed claims were directed to an idea of escrow.⁸⁶ To argue differently, the patentee asserted that the disputed claims embraced “a technological improvement over prior art systems for confirming and processing online payments” and “provide[d] specific steps for processing an online payment”⁸⁷ However, the Federal Circuit rejected the patentee’s view.⁸⁸

First, the Federal Circuit characterized the disputed claims as merely “describ[ing] steps of passing information back and forth by a computer.”⁸⁹ Second, the Federal Circuit observed that the specification described “[t]he very purpose of the patents, as . . . verifying consummation of a transaction before releasing payment by a third party.”⁹⁰ Relying on an online dictionary, the Federal Circuit concluded that such a purpose fell within the dictionary definition of “escrow.”⁹¹ Third, the Federal Circuit emphasized that the disputed claims functioned to execute a “payment [that] is held by the third-party Internet-based computer system and released to the seller only upon the fulfillment of a condition” and, therefore, mimicked those claims in *Alice* that were directed to an abstract idea of “exchanging financial obligations between two parties

⁸⁵ *Id.* at 530 (emphasis added).

⁸⁶ *Id.* at 532.

⁸⁷ *Id.*

⁸⁸ *See id.* at 532–33.

⁸⁹ *Id.* at 532.

⁹⁰ *Boom! Payments, Inc.*, 839 F. App’x at 532.

⁹¹ *See id.* (citing *Escrow*, MERRIAM-WEBSTER, www.merriam-webster.com/dictionary/escrow [<https://perma.cc/3HNV-QYL7>]).

using a third-party intermediary to mitigate settlement risk.”⁹²

In addition, the Federal Circuit specifically objected to the patentee’s two proposed non-abstract features.⁹³ The first feature was “the use of the buyer identifier as the specific means for confirming consummation of the transaction to distinguish its system from conventional escrow.”⁹⁴ However, the Federal Circuit stated that the “use of an identification code known only to the buyer and the third party to verify a transaction could be performed just as readily without the use of computers”⁹⁵ Therefore, the Federal Circuit determined that the buyer identifier was not qualified as “a ‘technological’ solution that improves the functioning of a computer system” and does nothing more than add “a second layer of abstraction—specifically, identity authentication—on the escrow procedure described by the [disputed] claims.”⁹⁶

As for the second feature, the patentee characterized claim 1 of the ‘840 Patent as “a specific programmed order of a payment processing system” which includes:

[R]eceiv[ing] a buyer’s payment information, and thereafter, upon a later receipt of a request by the buyer to purchase an item online, generat[ing] a transaction-specific buyer acceptance identifier that is then used not only in lieu of the buyer’s payment information but also as the means for the seller to

⁹² *Id.* (citing *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 219 (2014)).

⁹³ *See id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Boom! Payments, Inc.*, 839 F. App’x at 532.

indicate confirmation of the transaction when the seller later returns a corresponding identifier.⁹⁷

Nonetheless, the Federal Circuit treated this characterization as only summarizing the details of an escrow arrangement.⁹⁸ Therefore, the Federal Circuit held that the disputed claims were directed to an abstract idea at step one.⁹⁹

C. Step Two Analysis

Under step two, the Federal Circuit found no inventive concept recited in the disputed claims.¹⁰⁰ The Federal Circuit specifically responded to the patentee’s three arguments.¹⁰¹ First, the patentee argued that the inventive concept was the use of the buyer identifier which “‘increase[s] online payment security without making the payment flow burdensome on either the buyer or the seller’ by ‘removing the need for any static buyer payment information, such as credit card numbers.’”¹⁰² But, the Federal Circuit opined that the use of the buyer identifier “serve[d] only to authenticate the transaction” and, therefore, was “not rooted in a technological problem or solution.”¹⁰³ The Federal Circuit also pointed to the written description which acknowledges that the transaction

⁹⁷ *Id.* (emphasis added); see Plaintiff-Appellant Boom! Payments, Inc.’s Opening Brief at 28–29, Boom! Payments, Inc. v. Stripe, Inc., 839 F. App’x 528 (Fed. Cir. 2021) (No. 20-1274).

⁹⁸ See *Boom! Payments, Inc.*, 839 F. App’x at 532–33.

⁹⁹ *Id.* at 533.

¹⁰⁰ See *id.*

¹⁰¹ See *id.* at 533–34.

¹⁰² *Id.* at 533 (quoting Plaintiff-Appellant Boom! Payments, Inc.’s Opening Brief, *supra* note 97, at 48).

¹⁰³ *Id.*

confirmation was “routine prior to the date of the invention.”¹⁰⁴

Second, the patentee asserted that “the order and timing of the specific [claimed] steps” were “inventive improvements over prior art systems.”¹⁰⁵ But, the Federal Circuit found that the order and timing merely reflected “the necessary steps of executing payment escrow” which does “not constitute an inventive concept.”¹⁰⁶

The patentee’s third argument was that the allegations in the complaint sufficiently showed that the alleged inventive concept was “not routine and conventional” such that it could survive dismissal under Rule 12(b)(6).¹⁰⁷ But, the Federal Circuit criticized that the factual allegations in the complaint were only conclusory statements which the court should disregard “when evaluating a complaint under Rule 12(b)(6).”¹⁰⁸ Thus, the Federal Circuit held that the district court did not err in granting the motion to dismiss on the ground of patent-ineligibility.¹⁰⁹

IV. PRACTICAL IMPLICATIONS DRAWN FROM *BOOM!* PAYMENTS, INC. V. STRIPE, INC.

A. Patent-Ineligible Nature of Smart Contract Innovations

Boom! indicates that smart contract inventions are born with a patent-ineligible nature. The key feature of smart contract technology is akin to escrow because the blockchain acts like a third-party by holding assets until

¹⁰⁴ *Boom! Payments, Inc.*, 839 F. App’x at 533.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* (quoting *Simio, L.L.C. v. FlexSim Software Prods., Inc.*, 983 F.3d 1353, 1365 (Fed. Cir. 2020)).

¹⁰⁹ *Id.* at 533–34.

agreed-upon conditions are met.¹¹⁰ Under *Boom!*, a claim of a smart contract invention may be directed to an abstract idea of escrow and, therefore, fail step one if the claim language merely reflects a general or detailed process of verifying completion of a transaction before releasing payment by a third party.¹¹¹ However, reciting a technological solution in a claim may be a way to overcome the step one challenge because the *Boom!* court’s step one analysis examined whether the disputed claims’ “use of an identification code known only to the buyer and the third party to verify a transaction” can be “a ‘technological’ solution that improves the functioning of a computer system.”¹¹²

Since *Boom!*, the Federal Circuit has implemented this “technological solution” approach in the step one analysis in some cases.¹¹³ The question is what may

¹¹⁰ See Deborah R. Gerhardt & David Thaw, *Bot Contracts*, 62 ARIZ. L. REV. 877, 891 (2020).

¹¹¹ See *Boom! Payments, Inc.*, 839 F. App’x at 532.

¹¹² See *id.*

¹¹³ See, e.g., *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021); *Universal Secure Registry L.L.C. v. Apple Inc.*, 10 F.4th 1342, 1352 (Fed. Cir. 2021); *Repifi Vendor Logistics, Inc. v. IntelliCentrics, Inc.*, No. 2021-1906, 2022 WL 794981, at *2 (Fed. Cir. Mar. 15, 2022) (rejecting the patentee’s argument “that the claimed method is a technological solution”); *Riggs Tech. Holdings, L.L.C. v. Cengage Learning, Inc.*, No. 2022-1468, 2023 WL 193162, at *2 (Fed. Cir. Jan. 17, 2023) (“The recited technology, like handheld devices and servers, are used as a ‘conduit for the abstract idea,’ not to provide a technological solution to a specific technological problem.”) (quoting *In re TLI Commc’ns L.L.C. Pat. Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016)); *People.ai, Inc. v. Clari Inc.*, No. 2022-1364, 2023 WL 2820794, at *11 (Fed. Cir. Apr. 7, 2023); *Eolas Techs. Inc. v. Amazon.com, Inc.*, No. 2022-1932-35, 2024 WL 371959, at *5 (Fed. Cir. Feb. 1, 2024) (“Case law from the Supreme Court and this court suggests that claims purporting to improve a technological process are not directed to an abstract idea under § 101.”); *Savvy Dog Sys., L.L.C.*

constitute a technological solution. *cxLoyalty, Inc. v. Maritz Holdings Inc.* is instructive because the Federal Circuit there expressly reasoned why the disputed claims were directed to an abstract idea rather than a technological solution to a technological problem.¹¹⁴

In *cxLoyalty, Inc.*, the asserted technological problem was “the problem of connecting the loyalty awards system with those of third-party vendors while keeping the overall nature of the transaction hidden.”¹¹⁵ However, the Federal Circuit explained that even if this assertion recites a solution to that problem, that would still not constitute “a technological problem requiring a solution that improves the *performance of the computer system itself*.”¹¹⁶ Therefore, whether an alleged solution is technological for purposes of step one turns on whether the solution responds to any technological problem. A technological problem must be a problem affecting the performance of a computer system, rather than arising from a transaction.¹¹⁷

The *cxLoyalty* court also mentioned that the patentee failed to “contend that the claimed invention improves the use of computers as a tool by reciting a new technological way for computers to conceal such information.”¹¹⁸ Hence, a claim must specify how a technological solution is implemented through a computer system to resolve the alleged problem.¹¹⁹

v. Pa. Coin, L.L.C., No. 2023-1073, 2024 WL 1208980, at *3 (Fed. Cir. Mar. 21, 2024).

¹¹⁴ See *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021).

¹¹⁵ *Id.*

¹¹⁶ *Id.* (emphasis added) (quoting Brief of Cross-Appellant Maritz Holdings Inc. at 45, *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367 (Fed. Cir. 2021) (Nos. 2020-1307, 1309).

¹¹⁷ See *id.*

¹¹⁸ *Id.*

¹¹⁹ See *Universal Secure Registry L.L.C. v. Apple Inc.*, 10 F.4th 1342, 1352 (Fed. Cir. 2021).

Under the “technological solution” approach, a smart contract invention must focus on a technological problem impacting the performance of a blockchain system where a smart contract is executed. For instance, U.S. Patent No. 10,832,239 (“‘239 Patent”) identifies a security risk that involves attackers “exploit[ing] vulnerabilities in deployed smart contracts to construct a transaction to redirect funds controlled by the smart contract to the attacker’s account.”¹²⁰ However, the “technological solution” approach requires a smart contract claim to include a computer-implemented solution.¹²¹ The ‘239 Patent merely provides a whitelist capable of identifying authorized requesting accounts but does not specify any technological features of the whitelist, such as whether the whitelist is composed of any physical components or is written as a computer code.¹²² Thus, the ‘239 Patent may not overcome the step one challenge.

B. Difficulty in Searching for an Inventive Concept

The patent-ineligible nature of a smart contract innovation may lead the patent-eligibility issue to the final question concerning *Alice* step two. The exact question is what else a claim of a smart contract innovation has to survive step two.¹²³ *Boom!* indicates that any alleged inventive concept within a claim of a smart contract

¹²⁰ U.S. Patent No. 10,832,239 col.1 ll. 37–39.

¹²¹ *Enfish, L.L.C. v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

¹²² U.S. Patent No. 10,832,239 col.9 ll.30–64.

¹²³ *See Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014) (“First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, ‘[w]hat else is there in the claims before us?’”) (citation omitted) (alteration in original).

invention must present something more than “merely the necessary steps of executing payment escrow” or authenticating a transaction.¹²⁴

Consider the ‘239 Patent again. The whitelist feature is merely a way to authenticate the rightfulness of requesting accounts.¹²⁵ Claim 1 of the ‘239 Patent recites:

[T]he whitelist is predefined before the smart contract is called, the whitelist comprises a function decorator specific to a programming language of the smart contract, the whitelist comprises a reference to a location external to the smart contract that stores identifiers of accounts authorized to execute the smart contract, and the whitelist is configured to be called before an execution of the main function of the smart contract.¹²⁶

Before the effective filing date of the ‘239 Patent, Dec. 28, 2018, the “whitelist” concept had been used in a smart contract platform called the “Decentralized Autonomous Organization” (DAO).¹²⁷ The DAO’s whitelist is a list of Ethereum Blockchain addresses that could receive Ether (ETH) from “The DAO” if some condition is met.¹²⁸ In addition, “function decorator” is a

¹²⁴ See *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App’x 528, 533 (Fed. Cir. 2021).

¹²⁵ See U.S. Patent No. 10,832,239 col.8 ll. 21–49.

¹²⁶ *Id.* at claim 1.

¹²⁷ See Kyung Taeck Minn, Note, *Towards Enhanced Oversight of “Self-Governing” Decentralized Autonomous Organizations: Case Study of the DAO and Its Shortcomings*, 9 NYU J. INTELL. PROP. & ENT. L. 139, 141, 152–53 (2019) (“If a curator determined that a proposal met these criteria, [she] could add the proposal to the “whitelist,” which was a list of Ethereum Blockchain addresses that could receive [funds] from The DAO if the majority of DAO Token holders voted for the proposal.”) (alteration in original).

¹²⁸ See Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81207, at 8 (July 25, 2017),

standard term used in the Python language.¹²⁹ So, the whitelist feature may be considered a well-understood, routine, and conventional activity previously known to the industry and cannot overcome step two.¹³⁰

The *Alice* analysis of the ‘239 Patent indicates the difficulty a smart contract invention will encounter in meeting the patent-eligibility requirement. If *Boom!* becomes a precedent applying to smart contract patents, there may be a crisis in patenting smart contract innovations.

C. *Strategic Patent Drafting*

Boom! creates a crisis in the patenting of smart contract inventions, but the challenge may be overcome by strategic patent drafting.¹³¹ *Rady* may require a patent-eligible blockchain invention to provide “any new type of blockchain or any improvement in blockchain functionality”¹³² As the Federal Circuit in *Enfish, L.L.C. v. Microsoft Corp.* has observed, “[s]oftware can make non-abstract improvements to computer technology just as hardware improvements can”¹³³ The *Enfish* court also emphasized that “[m]uch of the advancement made in

<https://www.sec.gov/files/litigation/investreport/34-81207.pdf>
[<https://perma.cc/XK6L-ETLX>].

¹²⁹ See Apcelent, *Python Decorator Tutorial with Example*, DEV COMMUNITY (July 9, 2018), <https://dev.to/apcelent/python-decorator-tutorial-with-example-529f> [<https://perma.cc/V55M-A4DG>].

¹³⁰ See *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018).

¹³¹ See Ping-Hsun Chen, *Patent-Eligibility Standard for Network Architecture Patents Under the Federal Circuit’s Jurisprudence*, 36 SANTA CLARA HIGH TECH. L.J. 1, 37–41 (2019) (discussing patent drafting strategies for overcoming the patent-ineligibility issue).

¹³² *Rady v. Bos. Consulting Grp., Inc.*, No. 2022-2218, 2024 WL 1298742, at *4 (Fed. Cir. Mar. 27, 2024).

¹³³ *Enfish, L.L.C. v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016).

computer technology consists of improvements to software that, by their very nature, may not be defined by particular physical features but rather by *logical structures and processes*.¹³⁴

The ultimate question is how to illustrate “non-abstract improvements in software’s logical structures and processes” in a specification or claims.¹³⁵ *Enfish* is instructive because the patented technology there involves a data storage and retrieval system for computer memory.¹³⁶ Similarly, smart contract technology involves data storage and retrieval through a blockchain system.¹³⁷ In addition, the *Enfish* court found that the disputed claims were not directed to an abstract idea.¹³⁸ Thus, the patent-eligibility reasoning behind *Enfish* may indicate how a smart contract invention should be described in a specification and how a claim should be written to present a patent-eligible subject matter.

Two important aspects can be drawn from *Enfish*. First, the Federal Circuit acknowledged that the specification showed how the claimed invention (namely, the “self-referential table”) “functions differently than conventional database structures.”¹³⁹ For instance, the specification explained how conventional database

¹³⁴ *Id.* at 1339 (emphasis added).

¹³⁵ *Id.* at 1335.

¹³⁶ *See id.* at 1336–37, 1340.

¹³⁷ *See* Peter L. Michaelson, Esq. & Sandra A. Jeskie, Esq., *Arbitrating Disputes Involving Blockchains, Smart Contracts, and Smart Legal Contracts*, 74 DISP. RESOL. J. 89, 110 (2020) (describing how smart contract technology uses pre-defined conditions to retrieve stored data); *see also* Kelsey Bolin, *Decentralized Public Ledger Systems and Securities Law: New Applications of Blockchain Technology and the Revitalization of Sections 11 and 12(a)(2) of the Securities Act of 1933*, 95 WASH. U. L. REV. 955, 961–62 (2018) (explaining smart contract utilization of decentralized ledgers to store data and use triggering conditions to retrieve it).

¹³⁸ *See Enfish, L.L.C.*, 822 F.3d at 1336.

¹³⁹ *Id.* at 1337.

structures are formulated and detailed how different data types are organized and cross-referenced in the self-referential table.¹⁴⁰ The specification also asserted that the self-referential table is more advanced than traditional database structures, such that a programmer is not required to preconfigure a certain data structure.¹⁴¹ Finally, the specification mentioned other benefits that the claimed invention would create, such as “increased flexibility, faster search times, and smaller memory requirements,” which are related to technological improvements.¹⁴²

Second, the Federal Circuit interpreted the claim language of “means for configuring” as requiring a four-step algorithm.¹⁴³ The Federal Circuit then found that the disputed claims were more than an abstract idea of organizing information in a tabular format because one step of the algorithm described how the self-referential table is created.¹⁴⁴

Therefore, *Enfish* suggests at least five topics that the specification of a smart contract patent should include: (1) a conventional smart contract that needs improvements by the claimed invention; (2) the details of executing the conventional smart contract; (3) the details of executing the claimed invention; (4) the algorithm required to perform the claimed invention; (5) technological benefits brought by the claimed invention and demonstrating the claimed invention’s advance over the conventional smart contract. In addition, a claim implementing a smart contract should recite the algorithm to avoid the uncertainty of claim construction, which may affect patent-eligibility determination.

¹⁴⁰ *See id.* at 1330–33, 1337.

¹⁴¹ *See id.* at 1337.

¹⁴² *See id.*

¹⁴³ *See id.* at 1336–37.

¹⁴⁴ *See Enfish, L.L.C.*, 882 F.3d at 1337–38.

V. CONCLUSION

While patenting smart contract applications continues, the patent-eligibility of smart contract inventions is questionable because a “smart contract” is internet-based technology. *Boom!* adds another level of the patent-eligibility challenge due to the escrow nature of smart contract technology. Under *Boom!*, a smart contract claim may be held patent-ineligible as an abstract idea of escrow if it merely recites a process for a third party to verify the completion of a transaction and then release payment.¹⁴⁵ However, this crisis in the patenting of smart contract inventions could be resolved. *Enfish* may bring smart contract patentees the help that they need. *Enfish* suggests strategic patent drafting for a smart contract invention to overcome the patent-eligibility challenge. Specifically, the specification of a smart contract invention should include the details of both a conventional smart contract and the claimed invention, particularly outlining both the performing algorithm and the technological advances brought by the claimed invention. These *Enfish*-inspired details in the specification may negate the patent-ineligibility concerns raised by *Boom!* and further help courts identify any unconventional features of a smart contract invention that sufficiently constitute an inventive concept, as required by the *Alice* standard.

¹⁴⁵ See *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App’x 528, 532 (Fed. Cir. 2021).